

FLOWERING PLANTS

ACTIVITIES and WORKSHEETS for Life cycle of a Flowering plant



FLOWERING PLANTS

ACTIVITY: Flower Observation

KS1/KS2

Curricular Links: Science and maths

Time: 30 minutes +/-

Equipment: pencil, information sheet and worksheet

Place: Any flower border

School term: Any

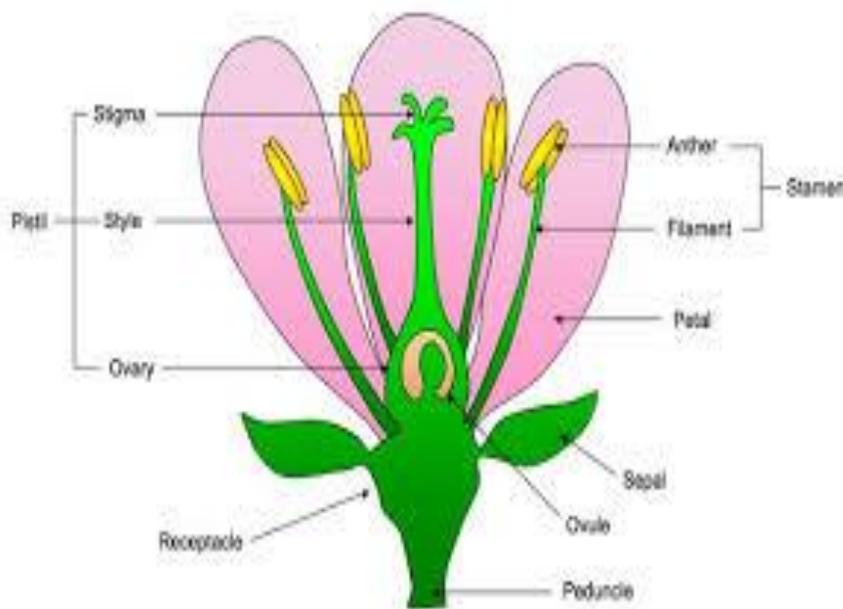
Instruction: Choose a flower to observe. Please note not to be picked. Using the information sheet as a help sheet, answer questions from the given worksheet. Can choose to observe either a single flower or several for comparisons. When questions completed draw a picture of the flower and cross-section

FLOWER OBSERVATION SHEET

Upper KS2

Information sheet.

Diagram showing cross-section of a flower structure



Life cycle of a flower

The brightly coloured petals, the scent and the nectar attract insects such as bees to the flower. The bee accidentally transfers pollen onto the female part, the sticky **stigma**. This is called **POLLINATION**.

The fertilised egg cells turn into seeds. This is called **SEED PRODUCTION**.

The pollen grains travel down from the **stigma** and through the **style** into the **ovary**.

The bees crawl around inside the flower, looking for the nectar and accidentally get covered in pollen from the male part, the **anther**. Inside the **ovary** are **ovules** (egg cells) which the pollen fertilises. **This is called FERTILISATION**.

Once the seeds have been made, the flower needs to scatter them about on the ground. **This is called SEED DISPERSAL**.

Once the seeds have been dispersed into the ground, **another** flower will grow.

Flower observation sheet

Choose the flower you wish to study.

Answer the following questions:

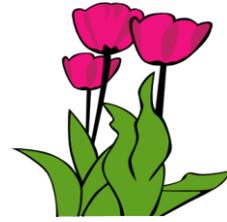


1. Are the flower petals symmetrical ?
2. Are the petals separate or are they formed into a tube?
3. Count the number of petals.
4. Look for sepals, count them and state their colour .
5. Find the stamens. Are they separate or attached to something else?
6. Filaments are they long or short?
7. How many lobes has the anther?
8. Can you see the pollen grains?
9. How many ovaries can you see ?
10. Is the style long or short?
11. What shape is the stigma?



Flower observation sheet

Choose a flower to observe.



Is there one flower on the stem or more?

If more than one, how many flowers make the bunch?

What shape are the petals?

What colours can you see?

Count the number of petals on the flower.

Are the edges smooth or jagged?

Is the petal plain or patterned?

Are the petals all the same size?

Can you measure them or estimate the size?

Are the petals joined or separate?

Can you see any buds?

Can you find any creatures on the flower?

Gently touch the petals. How do they feel?

Smell the flower. Is it fragrant?

Can you see any pollen?

Can you see the stamens?



Drawing of the flower I observed.

Cross section of flower.

FLOWERING PLANTS

A HUNTING WE WILL GO

KS1/KS2

Curricular Links:

Science

Time:

30 minutes +/-

Equipment:

Pencil and worksheets

Place:

Walled garden Area 8 on map
Ornamental lawns Area 21 on map
Most areas suitable

School term:

Autumn

Instructions:

Either as a class or in small groups search for the plants as pictured on worksheet.

Choice of two worksheets

Use questions on worksheet to help give further information about each plant.

A hunting we shall go!

Seed Dispersal Work Sheet

Almost like a treasure hunt, locate these seed pods and give further information.

1. Can you identify these seeds ? If you get stuck go to the bottom of the next sheet and see if the names will help you.
2. See if you can find them in the gardens, say where you found them (what area).
3. What height level are they?(ground, hedge, tree)
4. Guess how these disperse? (wind, animal, explosion, water or something else?)
5. Can you explain how dispersal happens (look closely at each seed pod what features does it have to give you clues?)

A Hunting We Shall Go!



Names (not in order!) sycamore,gorse, burdock, dandelion, bramble, flag iris,thistle, hazelnuts,

A HUNTING WE WILL GO! SEED DISPERSAL

Can you identify these methods of seed dispersal?



See if you can find flower examples of each type and write the name of the seed next to the picture.

FLOWERING PLANTS

PETAL and SPIRAL COUNT

KS1/KS2

Curricular Links:

Science and maths

Time:

15 minutes +/-

Equipment:

pencil, worksheet

Place:

Any flower border and Arid Garden (area no.4)

School term:

Any



1

3

5

8

13

21

34

In the early 1200's, an Italian mathematician Leonardo of Pisa (nicknamed Fibonacci) discovered the famous Fibonacci sequence.

The Fibonacci sequence appears in many areas of nature. Fibonacci and the golden ratio can be found in:

Flower Petals

Spirals, e.g. pine cones, cactus spines

Fibonacci sequence

1 1 2 3 5 8 13 21 34 - - -

Instructions:

Can you explain how the sequence works?

Look at flowers and count the number of petals.

Remember look and not pick them, write the numbers down. Are they Fibonacci numbers?

Looking at the base of pine cones count the number of spirals. Are they Fibonacci numbers?

Observe cacti, look and count the number of spirals. Are they Fibonacci numbers?

PETAL COUNT

Fibonacci Sequence investigation.



1

3

5

8

13

21

34

Number of petals

Pine cones - Number of spiral

1	
2	
3	
5	
8	
13	
21	
34	
More !	
89	

Cacti – number of spirals

Do they follow the Fibonacci sequence?

FLOWERING PLANTS

Investigation Activity

KS1/KS2

Do insects prefer different colour flowers?

N.B. Can choose to select bees, Ladybirds or butterflies depending on time of year and weather conditions.



Curricular Links:

Science and maths

Time:

15 minutes +/-

Equipment:

pencil, worksheet

Place:

Long border (area 8 on map)

School term:

Summer/ Autumn

Instructions:

Choose a comfortable place to sit.

Sit very quietly.

Tick the correct flower colour on record sheet.

Everyone must start and finish at same time.

Count total of each colour.

Create graph or pictogram from results.

Use results to ask further questions.

Do insects prefer different colour flowers?

Record Sheet: Write the number in the frame under each colour flower

